STATEMENT OF
ERIK D. OLSON
SENIOR ATTORNEY
NATURAL RESOURCES DEFENSE COUNCIL

BEFORE THE
COMMITTEE ON GOVERNMENT REFORM
SUBCOMMITTEE ON THE DISTRICT OF COLUMBIA

AT HEARING ENTITLED

"GETTING THE LEAD OUT: THE ONGOING QUEST FOR SAFE DRINKING WATER IN THE NATION'S CAPITAL"

MARCH 11, 2005

OVERVIEW & SUMMARY

Thank you for the opportunity to present testimony today. I am Erik D. Olson, a Senior Attorney with the Natural Resources Defense Council (NRDC), a national non-profit public interest organization dedicated to the protection of public health and the environment, with over 500,000 members. I also am chair of the Campaign for Safe & Affordable Drinking Water, an alliance of over 300 public health, consumer, medical, nursing, environmental, and other groups that works to ensure safe drinking water for all Americans. I appear today only on behalf of NRDC.

Although some progress has been made since EPA issued the Lead and Copper Rule (LCR) in 1991, lead contamination of tap water remains a significant health risk in many communities in the United States, threatening the health of millions of Americans, especially children. The experience in Washington D.C., where tens of thousands of residents still have tap water containing unsafe levels of lead 14 years after EPA adopted its rule, is but one serious example of this ongoing risk.

EPA did not fulfill its obligation to aggressively oversee the safety of Washington's water supply, to ensure that the public is fully apprised of the health threats posed by lead in drinking water, or to enforce the Safe Drinking Water Act (SDWA). The agency has issued two Administrative Orders (on consent) to the D.C. Water and Sewer Authority (WASA), but EPA has failed to impose a single penny in penalties, or to initiate a civil or criminal case, despite ample evidence of clear violations of federal law. This raises key questions about the adequacy of EPA's drinking water program in D.C. and across the country.

For some time, the U.S. Army Corps of Engineers' Washington Aqueduct Division failed to treat the water it delivers to D.C. and neighboring Northern Virginia communities sufficiently to ensure that the water was not corrosive, in order to reduce lead contamination. D.C. WASA failed to act promptly or adequately in response to the lead contamination crisis, and neglected to adequately and clearly inform the public about the lead problem. A report commissioned by the WASA Board of Directors released last July, the "Holder Report", concluded that WASA failed to act promptly after it detected high lead levels in D.C. drinking water, and subsequently downplayed the scope of the lead contamination and the health threats it posed in communications with the public. The D.C. Inspector General also found widespread problems with WASA's communications and implementation of the lead rules. The nation's capital's water supply should be the best in the world, an international model. Instead, it is among the worst big city supplies in the nation.

While we appreciate that EPA's proposal this week to respond to the national lead crisis is at least an acknowledgement that there is a lead problem, in substance EPA proposes to change very little. The agency says it will adopt non-binding guidance documents, make nine very small changes to the rule, and hold some workshops. None of the proposals grapple with the most fundamental problems with the lead program highlighted by the past year's experience (see Table 1 for a summary of the changes needed to the lead in drinking water program, and EPA's response to these needs in its proposal this week).

EPA publicly asserted earlier this week that the LCR has effectively dealt with the lead problem in "more than 96 percent" of medium and large water systems, concluding that "there does not appear to be a widespread problem with elevated lead levels across the country…."[1] However, when one scratches beneath the surface, there is reason to question the sweeping assertion of safety.

First, even if one accepts EPA's data as complete, the data show that since 2000, over 10.4 million Americans drank water from large or medium water systems that exceeded the EPA lead action level.[2] Second, EPA has acknowledged to us that its assertion that there is "more than 96 percent" compliance with the LCR does not take into account the extensive evidence that water systems and states undercount lead problems, as amply documented by the Washington Post in October 2004.[3] Third, EPA's assertion of widespread compliance also does not take account of the underreporting of lead problems apparently

confirmed by an as-yet undisclosed 10-state data verification audit of state LCR programs done by EPA contractors in 2004. EPA's use of the incorrect 96 percent compliance figure without caveat is similar to the agency's frequent use elsewhere of drinking water compliance figures that grossly understate the numbers of violations. This EPA practice of misleadingly understating violations has been criticized by EPA's Inspector General, who found in a 2004 report that "EPA incorrectly reported meeting its drinking water goal" and inflated actual compliance rates, even though it knew the data it was quoting was "flawed and incomplete" and overstated compliance.[4]

EPA's public statement this week also trumpeted that "from 1995-2004, states have concluded 1,753 enforcement actions to ensure compliance with the [LCR], and EPA has concluded 570." What EPA fails to disclose is that the vast majority of this enforcement (93% of EPA's actions, and 82% of States' actions) took place in 2001 and earlier. As Figures 1 and 2 show, enforcement of the LCR has dropped precipitously in recent years, with EPA issuing only 16 Administrative Orders (AOs) in 2003 and just 12 in 2004 to enforce the LCR, and not taking a single LCR enforcement case to court for over 5 years.

In apparent response to public and Congressional pressure and adverse media coverage, EPA undertook a review of the lead rule, and has now proposed to take several actions that it says are based upon this year of review. At the outset, we note that EPA's review suffered from several process problems; the workshops EPA held were generally one-sided affairs dominated by industry and state representatives—the groups who had often failed to respond adequately to the problem in the first place.[*]

We were deeply disappointed to find this week that essentially none of our comments have been reflected in EPA's proposed rule changes for the LCR or in any legislative proposals from EPA. Even changes that many members of the industry or their consultants indicated may be worthwhile were not included in the EPA lead proposal. For example, despite the clear failure in Washington and many other cities of the rule's public notification and education language (and the delivery mechanisms) to get information effectively to the public, EPA proposes no changes to the rule's inadequate mandatory language and delivery provisions.

Similarly, EPA proposes no changes to the lead plumbing and fixtures provisions of the Safe Drinking Water Act (SDWA), and fails to recommend any legislation to deal with the lack of testing of schools and day care centers. Moreover, EPA proposes no significant changes to the testing rules that the Washington Post has shown are widely evaded or manipulated, nor does EPA propose and significant changes in the lead service line replacement rules that allowed so much confusion and inaction in Washington. EPA also makes no commitments to improve its recently moribund enforcement of the SDWA. Thus, EPA has avoided any proposals to deal with the heart of the problem, offering instead a series of proposals for non-binding guidance documents, workshops, and minor rule changes that would not likely resolve the lead problem.

This testimony first discusses in Part I the lead in drinking water problem in Washington D.C., and Part II discusses the lead problem nationally. Part III discusses what needs to be done, and compares that to what EPA proposed to do this week.

---

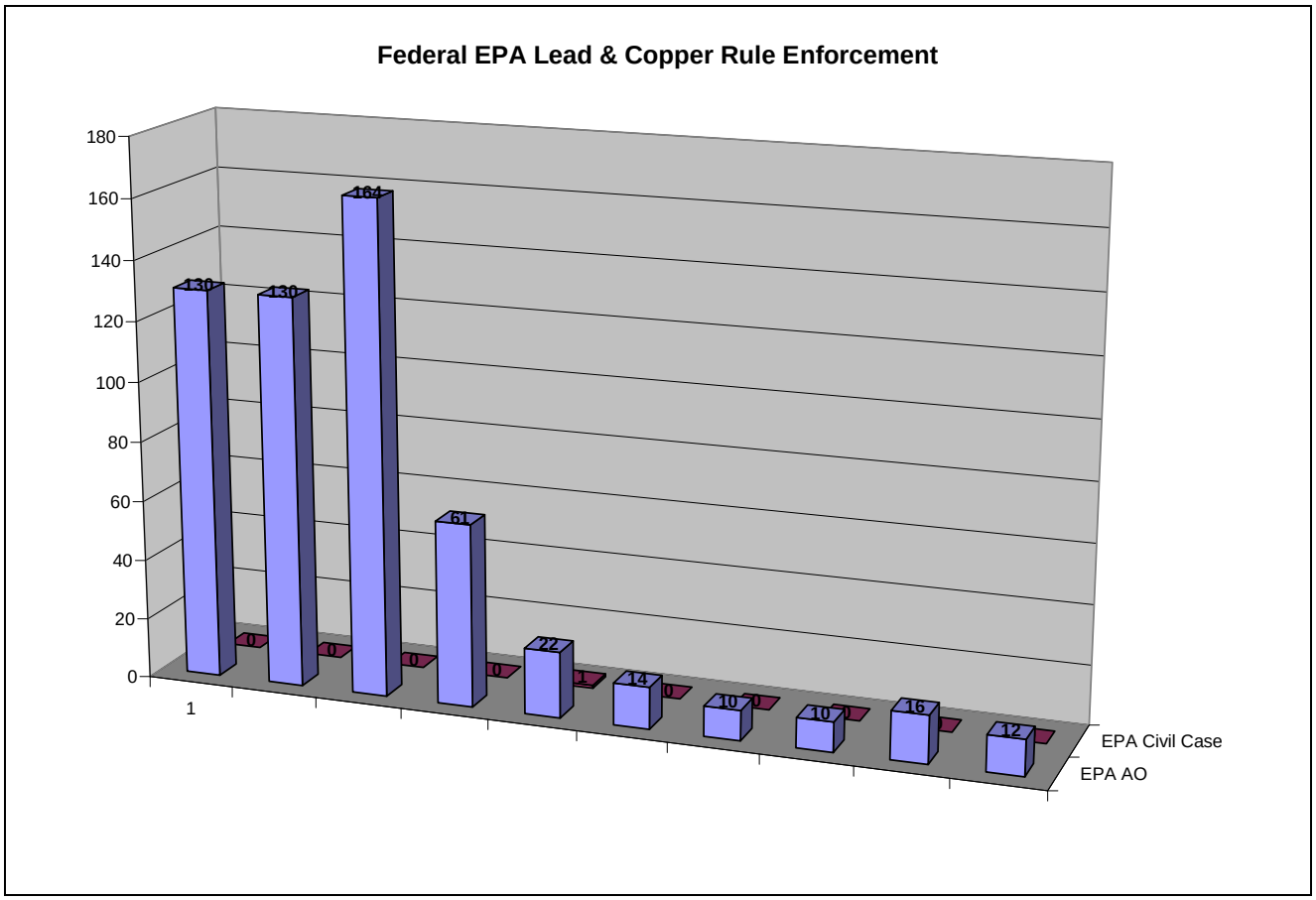
[*] For example, EPA convened four workshops to review a variety of issues regarding implementation of the LCR. After receiving notice of the first two workshops, I flew at NRDC expense to St. Louis to attend the first two (one on monitoring, the other on simultaneous compliance with the lead rule and other rules). I was shocked to learn that only water industry officials, their consultants, a few academics, and state officials were invited to participate in these meetings; I objected but was relegated to "observer" status and was told I could not participate in the plenary or breakout discussions, and could only speak during a brief public comment period. After complaining later to EPA management, I was invited to participate in the lead service line workshop, but was the only non-industry or state affiliated participant invited. We and a few other non-governmental organizations were invited to the final workshop (on public education).

TABLE 1:
ACTIONS NEEDED TO REMEDY LEAD PROBLEM vs. EPA PROPOSAL

ACTION NEEDED	**EPA's PROPOSAL** (Revision # From EPA List)
Fix Lead Pipe & Fixtures provision in the SDWA	
Congress should redefine "lead free" in SDWA §1417(d) to mean really lead free (no more that 0.1 or 0.25% incidental lead – as required by Los Angeles, Bangor, Maine, etc.)	**None** (EPA proposes a workshop)
Congress should fix the public notice provisions in SDWA §1417(a)(2), which clearly have been inadequate (e,g, DC)	**None**
Lead in Schools and Daycare Centers	
Congress should clarify SDWA §§1461-63 to eliminate any doubts about constitutionality raised by the decision in Acorn v. Edwards, 81 F.3d 1387 (5th Cir. 1996), holding that states can't be forced to develop school/day care lead testing plans.	**None**
Congress should require ongoing retesting of all schools and day care centers in light of Acorn, resulting widespread non-compliance, and new info on lead in many schools' tap water.	**None** (EPA proposes voluntary testing)
Congress should require strong notification of parents & staff	**None**
Congress should redefine "lead free" in the Lead Contamination Control Act (LCCA), which added SDWA §1461, to mean really lead free (0.1% or 0.25%, see above)	**None**
Congress should order an EPA review of SDWA §1462 implementation and effectiveness of lead fountain recall provision in all states	**None**
Fix the EPA Lead Rule & Associated Regulations	
Adopt a 10 or 15 ppb MCL at the tap. There was an MCL (50 ppb) until 1991.	**None**
As a clearly second-best alternative, the EPA lead rule needs serious overhaul:	
Action Level	
EPA should fix Action Level to protect health of all homes, not exempt up to 10% from protection	**None**
Corrosion Control	
Require review and revision of corrosion control plan if system comes out of compliance with action level	**None**
Require immediate review and re-approval of corrosion control programs if systems make treatment changes, and require review periodically.	Notify state 60 days in advance of treatment change, but no review/approval or periodic review required [Revision #6]
Public Notification & Right to Know	
Strengthen/overhaul inadequate language required for public education, public notice, and warnings to vulnerable people	**None**
Require more effective delivery mechanisms to reach public	**None**
Require information to be given to the public on where in system lead contamination is problem	**None**
Fix consumer confidence report rules; for example, WASA's report declared on the cover "Your Drinking Water is Safe" and buried the facts. Similar problems documented across the country.	**None**
Require evaluation of effectiveness of system's public education program	**None**
Require citizen participation in education efforts	**None**
Require immediate clear warning and alternative supply/filters if lead levels are far above safe level	**None**
Require utility to tell consumers immediately about their home's results and clearly notify them of risks	Would require utility to notify customer of test results; no time limit or warning stated [Revision #7]
Require more detailed info on filters, faucets	**None**
Require longer flushing time recommendation to consumers if needed	Would allow more flexibility on flushing instructions [Revision #8]

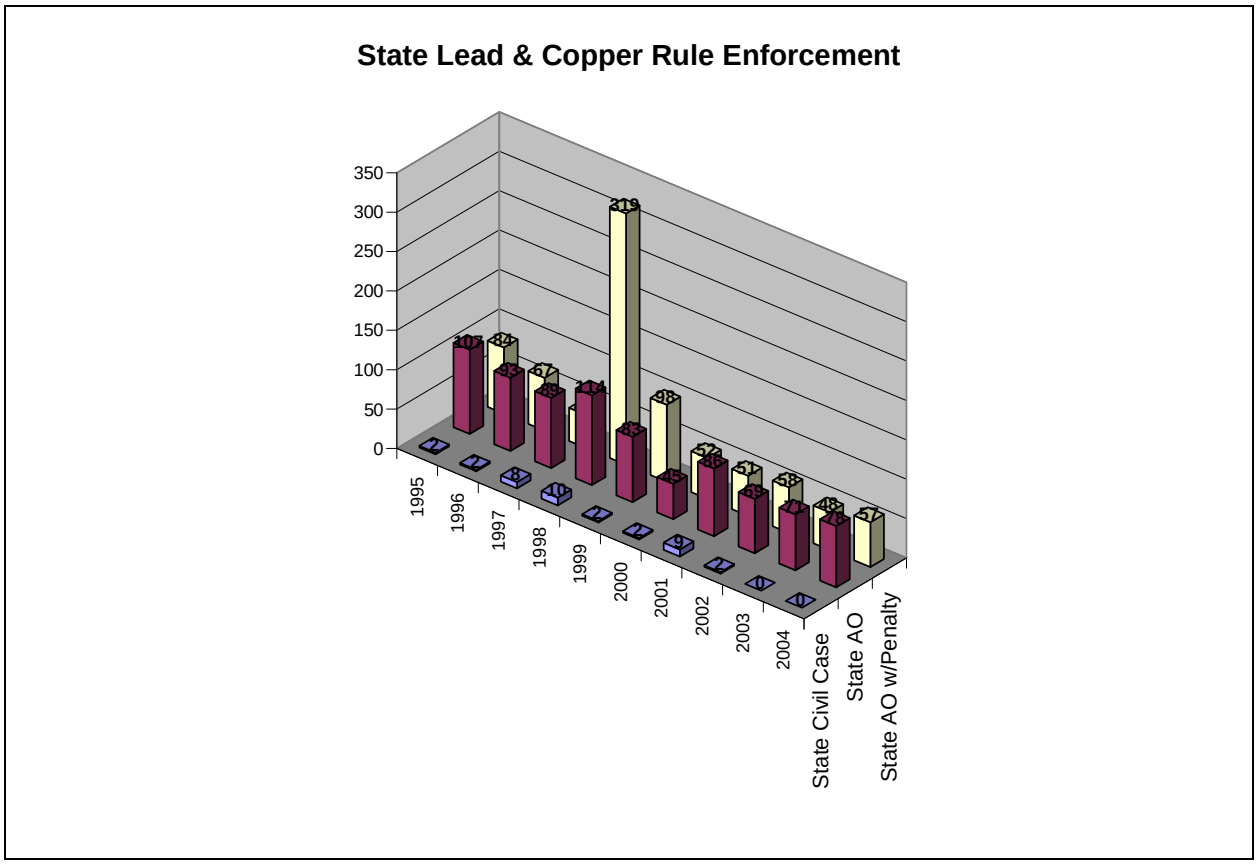
ACTION NEEDED	EPA's PROPOSAL (Revision # From EPA List)
Monitoring	
Increase number of homes tested so sample is statistically valid (50-100 for major city is insufficient)	**None**
Change monitoring requirements so systems cannot go for years without testing	**None**
To avoid reporting problems, require labs to electronically report test results to EPA, state, utility	**None**
Strengthen/clarify how sample locations are selected to hit highest risks and reduce gaming of the system	**None**
Automatically require increased monitoring if treatment changes could affect lead levels	**None**
At a minimum, do not allow waivers based on testing water quality parameters other than lead	Would no longer allow testing waivers based only on parameters other than lead [Revision #5]
Prohibit systems from cherry picking test data or failing to report data contradicting reported info	**None** (But 11/04 guidance says systems should report data collected from qualifying homes)
Clarify that all samples must be taken during same calendar year, and clarify number of locations to be tested and number of samples per location	Proposes to clarify these issues, but proposes no expansion of current testing requirements [Revisions #1, 2, and 4]
Lead Service Line (LSL) Replacement	
Require <u>full</u> not partial LSL replacement, since partial does not fully reduce lead levels	**None**
Expedite service line replacement to 10 or fewer yrs.	**None**
Require actual replacement of LSL; end loophole counting LSL as replaced based on testing	**None**
Require replacement of high risk service lines first (e.g. homes with young children and high levels)	**None**
At a minimum, require water systems that approved or required use of LSLs to replace those entire lines if they are contributing to lead over the action level	**None**
Require homes with LSLs to be told of risks	**None**
At a minimum, don't allow LSLs to be counted as replaced permanently based on testing; require retests if treatment changes.	Would require that any line previously deemed to be replaced through testing be re-evaluated in the event that a subsequent treatment change causes the system to exceed the action level. [Change #9]
Enforcement	
Enforce the law: impose penalties and initiate court cases	**None**
Other Key Changes Needed	
Require an overhaul and upgrade of EPA's poor compliance & data tracking system.	**None**
Require in-home certified filters to be provided to high-risk people with high lead, with water system-supplied maintenance as in 40 C.F.R. 141.100	**None**
Require federal buildings to be tested for lead levels, as has the Capitol complex	**None**

FIGURE 1



Source: NRDC from EPA Data

FIGURE 2



Source: NRDC, from EPA Data

I. D.C.'S LEAD IN DRINKING WATER PROBLEM

In June 2003, the Natural Resources Defense Council (NRDC) issued a report, "What's on Tap," that found that the drinking water in Washington, D.C., and several other cities was in precarious shape, and that lead, bacteria and certain other contaminants were of increasing concern in the District.[5] The tap water problems in D.C. received only modest local media attention at the time, but that was about to change.

On Saturday, January 31, 2004, Washingtonians collectively dropped their jaws at a banner Washington Post headline announcing that thousands of city homes' tap water contained unsafe levels of lead and the public had not been informed about it.[6] The local water utility, the D.C. Water and Sewer Authority (WASA), had done everything it could to keep the facts from city residents and city officials. This revelation triggered public outrage, investigations by the City Council, Congress and others, and led to embarrassing finger-pointing by city and federal officials. A new coalition of citizens formed, calling itself "Lead Emergency Action for the District," or LEAD. The LEAD coalition called upon WASA and other authorities to take a series of specific steps to remedy the lead crisis. This section provides a brief review of what we have learned over the past year, and what still needs to be done.

Systemic Problems at WASA, Health Department, Corps, and EPA

The D.C. tap water lead crisis spawned an array of investigations, including one by the Washington Post, which culminated in more than 100 articles[7], as well as published reports by: (1) former Deputy U.S. Attorney General Eric Holder and the law firm Covington & Burling, chartered by the WASA board of directors;[8] (2) the non-profit D.C. Appleseed Center, requested by City Councilwoman Carol Schwartz;[9] (3) the U.S. Environmental Protection Agency's (EPA) Region 3;[10] (4) the D.C. inspector general;[11] (5) the D.C. City Council's Public Works Committee and Councilwoman Schwartz;[12] (6) the federal Centers for Disease Control and Prevention (CDC)[13]; and the D.C. Government's Interagency Task Force on Lead in Drinking Water.[14] While we will not attempt to fully summarize all of the findings of these reports and our own investigations, several key findings, common themes, and recommendations are worth noting.

WASA consistently misled the public, often in violation of EPA rules. WASA has repeatedly failed to notify the public about its lead and other drinking water problems, or has affirmatively misled the public about these problems. WASA's refusal to play straight with the public has lead to virtually no public confidence in the utility. These omissions and outright misstatements continue to this day. Examples include WASA's:

- Decision in 2000-2001 to illegally "invalidate" test results showing high lead levels to avoid having to report that they exceeded EPA's action level and publicly report the problem.[15]
- Failure to follow EPA regulations and to use common sense to notify the public about the extent of the city's lead in tap water problem from 2002 to 2004, and its repeated statements that the water was safe, even when WASA admits it exceeded EPA's action level.[16]
- Misleading proclamation in February 2004 that its tests showed school lead levels were safe, when subsequent WASA tests completed in accordance with EPA protocols in April (after criticism that the first round was misleading) showed 28 schools had unsafe water fountains or taps.[17]
- Decisions to unjustifiably downplay risks. To quote the report to WASA's board of directors by its own internal investigator, Eric Holder, "WASA management made decisions to downplay some lead-monitoring issues in its public communications."[18]
- Continuing failures to honestly advise the public about tap water problems and their health implications throughout much of 2004, such as WASA head Jerry Johnson's statements at public forums that lead in city tap water presents no public health risk and that it is a crisis manufactured by the media.
- Failure to properly test for lead and correctly notify citizens with high lead levels of their results. On January 14, 2005, EPA issued a supplemental administrative order to WASA (to which WASA agreed).

The order stated that WASA had violated federal law by asserting that the water in more than 400 District homes had safe levels of lead and by failing to replace those lead service lines.[19]

WASA repeatedly violated the EPA rules on testing for lead. For example, WASA illegally "invalidated" lead samples in 2000 to 2001, used an unlawful testing protocol that flushed lead service lines for five minutes before testing them to avoid finding high lead levels and having to replace service lines (which triggered the EPA's January 2005 supplemental administrative order), and it used a testing protocol that flushed school taps before testing them, contrary to the established EPA protocol for school tests. These and other actions show a pattern of inadvertent or intentional behavior that violated EPA rules and misled EPA and the public.

WASA failed to aggressively complete full lead service line replacements. WASA apparently first violated EPA's rules requiring lead service line replacement in 2001 and 2002, and then in 2003 sought to use a loophole in EPA's rules that allows utilities to avoid replacing lead service lines if they were tested and found to supply water containing less lead than the EPA Lead Action Level (LAL). This problem was exacerbated by WASA's use of the unlawful protocol noted above. WASA's board of directors commendably has now directed WASA management to replace the WASA-owned portion of all lead service lines in the District. However, WASA is leaving it up to individual residents to replace the portion of the lead service line between the meters and their homes. Testing shows that elevated lead contamination in many homes will continue even after a partial lead service line replacement, prompting NRDC and LEAD Coalition members to urge full lead service line replacement for all lines.

WASA and the Army Corps of Engineers' Washington Aqueduct Division failed to promptly respond to the mounting lead problem. Despite clear indications as early as 2000 and 2001 showing alarming increases in lead levels in the District, WASA and the Corps (which collects and treats the water and then pumps it into WASA's distribution pipes) failed to aggressively step in and change their corrosion control treatment to reduce lead levels. Only after the news media blew the whistle in 2004 did WASA, the Corps, and EPA move with the necessary speed to address the problem.

WASA failed to effectively communicate with the District's Health Department and health-care providers, and Health Department fails to efficiently respond. WASA has repeatedly failed to effectively involve the D.C. Department of Health (DOH) in ongoing operations and when violations or other potentially health-threatening events occur. For example, the Holder report, the Appleseed report, Inspector General's report, and several other investigations found that there is an urgent need for better communications between WASA and DOH. Yet WASA's Jerry Johnson has rejected calls for a written agreement between WASA and DOH on how to handle crises and improve ongoing communications between the two agencies. In addition, even when WASA or EPA did notify DOH of the lead problem, DOH failed to act efficiently or effectively. Both DOH's director and environmental program head have left, creating an opportunity for improvement. WASA brought in a health advisor from George Washington University Medical Center, but has yet to establish an effective written outreach agreement with health care providers to inform them in the event of a serious water quality problem.

WASA has little or no health expertise on staff or its board, and responsibility for ensuring water quality and health protection is diffuse. Many of the independent investigations found that the lack of clear lines of accountability and responsibility within WASA for ensuring health protection and water quality is a serious problem. The lack of public health expertise on staff and on its board of directors only exacerbates the problem.

Serious shortcomings in EPA's lead rules and in the Safe Drinking Water Act cripple the lead in drinking water program. Several of the investigations, including the Holder report and the Appleseed report, hearings in Congress, and EPA's own workshops have identified significant deficiencies in EPA's lead in drinking water program and its regulations. The EPA lead in tap water rules and program establish a

complex scheme where up to 10 percent of tested households can exceed the agency's Lead Action Level (LAL) before additional action is required to reduce lead levels, and also requires certain notifications to be issued to the public about lead. The weaknesses of the program are legion, as the D.C. and many other examples illustrate. For example, the public notification provisions are clearly ineffective even if fully followed, and the structure of the rule and monitoring requirements need to be simplified and strengthened. This is discussed further below.

EPA's oversight of WASA and other cities has been poor. The Holder report, Appleseed report, and other independent reviews, as well as congressional hearing testimony from NRDC and others, have shown that before the Washington Post blew the lid off the lead problem in D.C., EPA took what can only be called a lackadaisical attitude about the District's lead problems. Moreover, the Post documented that widespread violations of the lead rule by dozens of other cities have gone unaddressed, finding: "Cities across the country are manipulating the results of tests used to detect lead in water, violating federal law and putting millions of Americans at risk of drinking more of the contaminant than their suppliers are reporting."[20]

EPA, the Centers for Disease Control, and D.C. Government commendably established a joint lead task force, with citizen participation, to evaluate the extent of lead poisoning from all sources in the District, and especially its impact on low-income African-American and Latino households. EPA also funded a lead outreach program in the city, which coordinates this task force. This is an important, positive development that should be commended.

WASA continues to resist meaningful integration of the public into its decision-making. Despite pressure from independent investigators and from the LEAD coalition, WASA has failed to meaningfully involve the public in its decision-making. While WASA's usual response to this criticism is to note that its board meetings are open to the public and that it held a series of public briefings on the lead crisis, such one-way communications in unbalanced forums do little to foster serious and meaningful dialogue.

Other Water Quality Problems in the District

The renewed focus on drinking water quality in D.C. has focused the spotlight on other problems with the District's water.

Bacterial contamination and the risk of pathogens. In NRDC's June 2003 report, it documented that there was a creeping increase in total coliform bacteria levels in the District's water supply. Total coliform is a group of bacteria that are used as an indicator of possible fecal contamination or possible regrowth of pathogenic bacteria in the system's pipes after disinfection. At that time, WASA admitted to no violations for several years, but data showed that peak coliform levels were gradually beginning to approach the EPA standard. EPA's standard requires that no more than 5 percent of total coliform bacteria can be detected in a city's water each month.

Many city residents remember past problems with bacteria and possible pathogens in the city's water supply that triggered violation notices and boil water alerts in 1993 and again in 1995 and 1996. In 2004, WASA violated the total coliform standard in September, triggering a mandatory public notification.[21] While EPA officials note that levels have since dropped, NRDC remains deeply concerned about potential bacteria and pathogen contamination of the D.C. water supply. This is in part because the Corps' monitoring for parasites such as *Cryptosporidium* is infrequent because it does not use advanced treatment such as ultraviolet light or ozone that is known to kill chlorine-resistant parasites like *Crypto*.

An NRDC employee whose immune system was compromised drank D.C. tap water and died in November 2004; *Crypto* was listed on his death certificate as a contributing factor in his death. While it is not possible to confirm the source of the *Crypto*, tap water must be a primary suspect. It is virtually impossible to determine the number of District residents who become ill from *Crypto* and other potentially waterborne

pathogens. The lack of public health infrastructure and D.C. Department of Health's inattention to this issue makes it impossible to ensure accurate and complete testing and reporting.

NRDC also is concerned about potential microbial pathogens because WASA has repeatedly failed to fully flush all of its pipes using unidirectional flushing (UDF), which is the most effective way to assure that the city's pipes are cleaned of bacteria and other pathogens that can regrow in the distribution system. Even after EPA ordered WASA to do a complete system UDF flush when it approved the city's new 2004 corrosion control plan,[22] WASA failed to comply with this order.[23] We are concerned that bacteria and potentially pathogen levels may again creep up as temperatures increase in 2005 (microbes often thrive in warmer water), particularly if WASA fails to properly complete UDF.

Rocket fuel perchlorate in D.C. tap water. It was recently revealed that perchlorate, the toxic component of rocket fuel and certain munitions, has been found in groundwater tests adjacent to the D.C. water supply's main Dalecarlia Reservoir.[24] The Corps of Engineers was slow to act on this finding until publicity spurred it into at least doing further testing. There are reports that nearby buried munitions from World War I may contain perchlorate, but the Corps has stated that it will likely be many years before it removes any of these munitions.

Subsequent to this revelation, the Corps had repeatedly assured the public that there was no risk that the perchlorate could get into the city's water supply. Despite its assurances, testing of water at the treatment plant has revealed perchlorate at levels of as high as 1.8 parts per billion (ppb).[25] The draft EPA safety level, issued in January 2002, is 1 ppb. No final standard has been adopted yet for perchlorate. A recent National Academy of Sciences study suggested that very low perchlorate levels may pose risks to pregnant women and infants (after adjustment for body weight and consumption of perchlorate from all sources), suggesting that there is indeed a risk to at least some District residents.

Cancer-causing and potentially miscarriage- and birth defect-inducing chlorination byproducts in D.C. tap water. The Army Corps continues to use old-fashioned treatment, including heavy doses of chlorine as its primary disinfectant. Chlorine is an important and generally effective disinfectant for killing bacteria and some viruses, but when used on water containing substantial amounts of organic matter (such as broken down leaves and runoff in the Potomac River water used in D.C.), it creates significant levels of a family of toxic chemical known as chlorination byproducts. Chlorination byproducts have been linked to cancer, including bladder cancer, and potentially to miscarriages, low birth weight, and certain birth defects.

Rather than following the course of some other cities, such as Seattle, which are switching to modern treatment (such as ultraviolet light, ozone, granular activated carbon, or membrane treatment) that would nearly eliminate these chemicals from our water supply, the Corps instead decided to use a cheap band-aid solution. Instead of modernizing, the Corps decided to add ammonia after chlorination, forming chloramines and thereby modestly reducing the creation of these chlorination byproducts to levels somewhat below the current weak EPA standard. This on-the-cheap solution appears to have backfired, because the switch to chloramines apparently contributed to the lead in drinking water problem in the District.

The levels of chlorination byproducts in city water still are a health concern. EPA has agreed to strengthen the current standard in a now-overdue rule, and evidence continues to mount of the reproductive and cancer risks posed by these chemicals.

Recommendations Regarding D.C. Water Problems

While the various independent reports all provide many detailed recommendations, NRDC and the LEAD coalition believe that some of the most important include:

- WASA should immediately name a new staff management team that has public health protection as its first priority.

- WASA's board and the Army Corps of Engineers, in cooperation with EPA and citizens, should establish an independent panel of experts and independent citizen representatives to conduct a top-to-bottom review of all treatment, distribution system, and infrastructure replacement issues. This should include a complete review of available options for installing advanced treatment such as ultraviolet light, ozone, granular activated carbon, membranes and other technologies. The team also should review the distribution operation, maintenance.

- WASA should complete unidirectional flushing of the entire system every year.

- WASA should adopt an infrastructure replacement plan that assures that aging pipes and components such as valves, pumps and other components are regularly replaced before they fail. As required in other cities such as Los Angeles and Bangor, Maine, the District should install only completely lead-free components (i.e., less than 0.2 percent lead).

- WASA should immediately embrace an "open book" policy and be completely forthcoming with all water quality data, and should rely upon independent experts to characterize health risks. WASA should stop downplaying risks posed by water quality problems.

- WASA's board should include several individuals with expertise in public health and at least one member with an engineering background.

- WASA should enter into a written agreement with the Department of Health and EPA, as well as with major institutions in its service area responsible for providing health care (especially to vulnerable individuals) on how to handle water quality problems.

- WASA should establish a public outreach and communication plan that meaningfully involves citizens or the agency is destined to continue to repeat its failures. The plan should include providing new or replacement filters to all families with elevated lead levels or lead service lines.

- The mayor should make protecting drinking water and the environmental a higher priority. He should insist upon accountability at WASA, and should assist the WASA Board in cleaning house at WASA's senior management level.

- The Corps should immediately survey the area around Dalecarlia Reservoir for buried munitions, and should promptly remove any that are found. The Corps also should comprehensively test the raw water, groundwater, and treated water on an ongoing basis for perchlorate. It should also install modern, state-of-the-art treatment for disinfection and removal of contaminants.

- EPA should take aggressive enforcement action and fine WASA for its chronic failure to comply with the agency's lead and total coliform rules. EPA also should complete a full criminal investigation into WASA's violations. If criminal activity occurred, EPA and the Justice Department should proceed with prosecution.

- EPA should overhaul its lead rule to make its public notification provisions more effective, and strengthen and simplify the standard. We support a strict at the tap maximum contaminant level for lead.

- Congress should enact the Jeffords/Norton legislation (S. 2377/H.R. 4268) requiring an overhaul and strengthening of the EPA lead-in-drinking-water rules, and banning all uses of lead in any fixtures, fittings and other plumbing parts.

- The D.C. City Council should adopt the relevant provisions of the Jeffords/Holmes-Norton lead legislation as city code requirements for WASA and the Washington Aqueduct.

- The City Council should create a permanent citizen water board to oversee WASA and the Washington Aqueduct, and address longstanding problems with D.C.'s water supply.

- The City Council and Congress must improve its oversight of WASA and the Army Corps' Washington Aqueduct. The council should insist upon the top-to-bottom review of water quality, treatment, infrastructure, and threats to the city's water supply, and conduct comprehensive oversight hearings on the results of that review.

II. THE NATIONAL LEAD IN DRINKING WATER PROBLEM

Lead health threats

This Committee and other Congressional committees have heard extensive testimony about the adverse effects of lead on health, particularly upon young children and fetuses. New data show adverse effects from lead exposure at far lower levels than previously thought to pose risks. Dr. Bruce Lanphear of Children's Hospital in Cincinnati, an internationally-leading expert on lead, recently stated "There is no discernible threshold for lead toxicity; indeed, lead-associated deficits in children's intellectual function are incrementally greater at blood lead < 10 mg/dL, the CDC action level. There is increasing data linking lead exposure with other diseases, including delinquency, tooth decay and cardiovascular disease."[26]

While few would suggest that lead from tap water is the leading cause of lead poisoning for most children, it is clear that lead from tap water can contribute significantly to blood lead, and that any additional lead in the bloodstream, particularly of a developing child, poses a serious health risk. EPA has found that in some bottle-fed infants who drink formula reconstituted with tap water, lead from the water may constitute 80 percent of the child's lead exposure.

The National Lead in Drinking Water Problem

Washington of course is not the only city in the U.S. affected by lead or other important tap water problems. Although EPA has asserted that lead contamination is no longer a significant national problem, its own survey of medium and large public water systems, though clearly suffering from underreporting, shows that millions of Americans are still at risk from excessive lead levels in their water. EPA's brief report completed in January 2005 found that since 2000, over 10.2 million people got water from systems that exceeded the lead action level.[27] Moreover, the Washington Post[28] and EPA's own internal data audits have confirmed that this is likely a significant understatement of the extent of the problem.

The Lansing, Michigan water utility recently announced that it is replacing 14,000 lead service lines because of contamination concerns, and several other cities have struggled with lead contamination in recent years, including Seattle, greater Boston, St. Paul, Minnesota, Bangor, Maine, Madison, Wisconsin, Ridgewood and Newark, New Jersey, Oneida, New York, and many others. Yet EPA maintains no accurate, up-to-date national information on this issue; national drinking water databases required by EPA rules are incomplete. Furthermore, EPA has failed to address state failures to comply with federal reporting rules, making effective EPA oversight and enforcement impossible.

In addition, school systems in many cities across the country – including in Seattle, Boston, Baltimore, Philadelphia, and Montgomery County, Maryland – have found serious lead contamination problems, but often have been slow to inform parents and resolve the problem. Many school systems have entirely failed to comply with the Lead Contamination Control Act of 1988's mandate to test school water for lead and replace coolers that serve lead-contaminated water. Often, even when testing is done, parents, teachers, and other school staff have not been fully informed of the results.

EPA and many states have done a poor job of ensuring that the EPA lead rule and the school testing and cooler programs are fully implemented. Moreover, the Washington D.C. crisis and experience in other cities highlight that the EPA lead and schools program and public education recommendations are difficult to enforce and ultimately ineffective. A court decision in Acorn v. Edwards[29] holding that portions of the lead in schools program cannot be enforced should trigger Congressional action to reinstate the lead in schools and daycare provisions of the SDWA.

Inadequate Enforcement of the Lead Rule

EPA and state enforcement of the LCR has been inadequate, particularly in the recent past. Figures 1 and 2 summarize the actions that have been taken to date. EPA has brought just one case in court to enforce the lead rule over the past 10 years, and has issued 569 administrative orders, the vast majority of which imposed no penalties. States have issued about 835 administrative orders imposing no penalties, 876 administrative orders imposing penalties, and have filed 37 court cases to enforce the lead rule. The proof is in the pudding: there should be full compliance with the rule now, 14 years after its issuance, but there remain millions of Americans served by water systems that are in violation of the lead rule.

III. WHAT'S NEEDED TO SOLVE THE LEAD PROBLEM AND THE SHORTCOMINGS OF EPA'S PROPOSAL

The problems discussed above lead us to conclude that a comprehensive overhaul of the lead in drinking water and lead in schools and day care centers program is necessary. EPA's proposal earlier this month simply does not address most of the needed changes. Most of the changes recommended below are embodied in Rep. Norton et al.'s bill H.R. 4268 from last Congress, which we strongly recommend be enacted.

The issues are summarized in Table 1 at the beginning of this testimony, and are discussed in somewhat more detail here.

The Lead Pipe & Fixtures provision in the SDWA Must be Fixed
Section 1417 of the SDWA includes measures that were intended to ban lead-containing plumbing and fixtures, so that we are not adding to our lead in drinking water problems. However, this measure suffers from serious flaws that allow continued sale of lead-contaminated and fixtures, including that it defines lead free as containing up to 8 percent lead. The NSF protocol issued with the approval of the plumbing manufacturers allows substantial lead contamination to leach from so-called lead-free plumbing fixtures, meters, etc., according to data collected by the University of North Carolina at Asheville's Environmental Quality Institute. Congress should simply redefine "lead free" in SDWA §1417(d) to mean really lead free (no more that 0.1 or 0.25 percent lead) as required by Los Angeles, Bangor, Maine, and other cities.

Although many members of the water utility industry expressed support for banning lead from fixtures during the EPA workshops, EPA has merely proposed to hold a workshop on this issue, but suggested no changes to the law.

Congress should fix the public notice provisions in SDWA §1417(a)(2)
The SDWA in section 1417(a)(2) required public notice to consumers if the lead content of their system or corrosivity of their water may cause lead contamination of consumers' tap water. As our experience in Washington and many U.S. cities has highlighted, this provision is wholly inadequate. It should be amended to require a much more comprehensive and effective public education campaign. EPA proposes no changes.

Lead in Schools and Daycare Centers

1. **Congress should clarify SDWA §§1461-63 to eliminate any doubts about constitutionality.**

A court decision in Acorn v. Edwards, 81 F.3d 1387 (5th Cir. 1996), held that states can't be forced to develop school/day care lead testing plans under SDWA §1461-63, because this violates the 10th Amendment to the U.S. Constitution. The Court found that the provisions in the SDWA that require state officials to adopt these plans, subject to the possibility of direct penalties, interferes with states' rights. While NRDC does not agree with this decision, we urge that Congress eliminate any uncertainty about the constitutionality of the provisions by making them a requirement to obtain federal funds including SRF funds. EPA proposes no changes to the law, stating only that it will amend its guidance documents and urge voluntary testing.

2. **Congress should require ongoing retesting of all schools and day care centers.**

In the wake of the Acorn decision and widespread failures of state and local officials to assure that schools and day care centers are testing their water for lead, and in light of recent data collected in many cities showing serious school water contamination with lead, the law should be amended to require periodic testing of water in school and day care center tap water. EPA propses no changes to the law, but says it will update its guidance and urge voluntary testing.

3. **Congress should require strong notification of parents & staff**

A widespread problem is that even if lead is tested in schools, students, parents, and even staff are often not adequately informed of the results. This should be remedied through amendments to the SDWA. EPA proposes no changes.

4. **Congress should redefine "lead free" in SDWA §1461 to mean really lead free**

Like the general plumbing provision in the SDWA, the schools provisions also define "lead free" fountains etc. to mean up mean they may contain up to 8 percent lead. This provision also should be amended to redefine lead free to mean truly lead free (0.1 percent or 0.25 percent lead). EPA proposes no changes.

5. **Congress should order an EPA review of the effectiveness of lead fountain recall provision**

In light of information indicating that many lead-contaminated fountains apparently are still in use, Congress should amend the SDWA §1462 to require a full review of the implementation and effectiveness of the lead fountain recall provision. EPA proposes no changes.

Fix the EPA Lead Rule & Associated Regulations

1. **Adopt a 10 or 15 ppb MCL at the tap.**

The experience in Washington and across the nation indicates that the LCR is unduly complicated, includes so many loopholes and complexities that it is virtually impossible for most members of the public to understand, and is difficult for state officials and industry members to fully grasp and assure compliance. Moreover, its complexity offers numerous opportunities for manipulation of the results. We urge, therefore, that EPA return to a Maximum Contaminant Level for lead, as it had until 1991. The MCL should be set at 10 to 15 ppb, enforceable at the tap. If a utility could show that it has done everything possible to reduce corrositivity and to eliminate lead components of its system, this could be an affirmative defense. This rule

would protect everyone, and would not allow up to 10 percent of households to be sacrificed. EPA apparently has given no serious consideration to this approach during its review.

2. In the Alternative, EPA Should Completely Overhaul the Lead Rule

a. EPA should fix Action Level to protect health of all homes, and not exempt up to 10%

The action level for lead, as currently constituted, allows up to 10 percent of the homes tested to exceed the level without any required remedy. This should be changed: all households should be required to have safe water. EPA proposes no changes.

b. Corrosion Control

The rule should require review and revision of corrosion control plan if system comes out of compliance with action level. EPA proposes no automatic review or revision. In addition , the LCR should be revised to require immediate review and re-approval of corrosion control programs if systems make treatment changes, and require review periodically. Again, EPA proposes no change. Finally, water systems should be required to tell states in advance of treatment changes that may affect corrosion. EPA proposes that water system be required to nNotify state 60 days in advance of treatment change, but no review/approval or periodic review required [EPA Proposed Revision #6]

c. Public Notification & Right to Know

The Washington D.C. experience has highlighted the serious problems with the public education and notification provisions of the LCR. The rule should be strengthened and overhauled to replace the inadequate language required for public education, public notice, and warnings to vulnerable people. EPA proposes no such changes.

In addition, the rules should require more effective delivery mechanisms to reach public. EPA proposes no changes here either. Moreover, the rule should be revised to require information to be given to the public on where in system lead contamination is problem. EPA does not address this.

The consumer confidence report rules also should be strengthened. WASA's report declared on the cover "Your Drinking Water is Safe" and buried the facts about the lead problem. Similar problems were documented across the country in NRDC's 2003 and 2004 reports noted earlier. EPA proposes no changes to these rules either.

Other changes needed include requiring evaluation of effectiveness of system's public education program, requiring citizen participation in education efforts, and mandating immediate clear warnings and provision of alternative supply/filters if lead levels are far above safe levels. Water systems should also be required to tell consumers immediately about their home's results and clearly notify them of risks. EPA addresses none of these issues, except to suggest that it would require utility to notify customer of test results; EPA mentioned no time limit or warning [EPA Proposed Revision #7]

The rules should also require that water systems provide detailed info on filters and the possibility that faucets and other fixtures, especially new ones, may contain lead that can leach into tap water. They also should require longer flushing time recommendation to consumers if needed. EPA does not address the issue of filters and faucets, but does recommend more flexibility on flushing instructions [Revision #8]

d. Monitoring

The Washington experience, and the investigations of the Washington Post, demonstrate the need for an overhaul of the monitoring rules as well. EPA should increase number of homes tested so sample is statistically valid (50-100 for major city is insufficient). In addition, EPA should change monitoring requirements so systems cannot go for years without testing. The rule should also seek to avoid reporting problems by requiring certified labs to electronically report test results to EPA, states, and the utility simultaneously. Utilities could publicly petition within a set period to challenge the accuracy of data.

In addition, there is an need to strengthen and clarify how sample locations are selected to hit highest risks and reduce gaming of the system. For example, homes selected for testing and retesting should be fixed and based upon better-defined criteria that truly identify the highest risk homes. The rules also should automatically require increased monitoring if treatment changes could affect lead levels.

Even if the rules are not changed to eliminate all monitoring reductions, at a minimum, the rules should not allow waivers based on testing water quality parameters other than lead. EPA proposes to remedy none of these problems, though it does proposed to no longer allow testing waivers based only on parameters other than lead [Revision #5]

The rules also should be changed to more clearly prohibit systems from cherry picking test data or failing to report data contradicting reported information. EPA makes no such suggestions, though its November 2004 guidance says systems should report data collected from qualifying homes. EPA also says the rules should be clarified to say that all samples must be taken during same calendar year, and that number of locations to be tested and number of samples per location. In addition, the agency proposes to clarify these issues, but proposes no expansion of current testing requirements [Revisions #1, 2, and 4] While possibly helpful at the margins, none of the proposed EPA changes appears to go to the heart of the national problems identified by the Washington Post or reviews of the D.C. WASA experience.

d. Lead Service Line (LSL) Replacement

The Washington problems and other cities' data indicate that the rules should be amended to require <u>full</u> not partial LSL replacement, since partial replacement does not fully reduce lead levels. Moreover, the rules should be changed to expedite service line replacement to 10 or fewer years, and to require actual replacement of LSL, eliminating the loophole that counts a LSL as replaced based on testing showing low levels of lead (below the action level). The rules should also require replacement of high risk service lines first (e.g. homes with young children and high levels). At a minimum, even if the systems are not all required to complete full LSL replacement, water systems that approved or required use of LSLs should have to replace those entire lines if they are contributing to lead over the action level. The rules should also require that residents of homes with LSLs be told of the line and the possible risks.

EPA proposes none of these changes. However, EPA does propose to require that any line previously deemed to be replaced through testing be re-evaluated in the event that a subsequent treatment change causes the system to exceed the action level. [Change #9]

Enforcement

Enforcement of the LCR has been weak, particularly in recent years. Even with extensive evidence of known and likely knowing violations of the law in Washington, EPA imposed no penalties and filed no court action, EPA and states should enforce the law:, impose penalties, and initiate court cases. Without enforcement,

utilities in violation are not deterred from continuing to violate the law; they are not held accountable. Moreover, when a system like WASA is not penalized, other water systems hear the message loud a clear: violation of the law is not taken seriously, and is tolerated.

Other Key Changes Needed

1. **Require an overhaul and upgrade of EPA's poor compliance & data tracking system**

EPA's internal audits, and the EPA Inspector General have found that EPA's drinking water data tracking system needs to be upgraded. States that fail to report, or report incompletely, are not penalized, meaning the data in the EPA system is often unreliable. This must be remedied. EPA proposes no changes.

2. **Require in-home certified filters to be provided, particularly to high-risk people with high lead**

Water systems should be required to supply certified filters to people whose water is contaminated with elevated lead levels. The systems should also be required to provide installation and maintenance as required in 40 C.F.R. 141.100. EPA proposes no changes.

3. **Require federal buildings to be tested for lead levels, as has the Capitol complex**

The drinking water in all federal buildings should be tested for lead, as the Capitol complex has been. Elevated lead levels should be remedied.

NOTES

[1] EPA, Press Release, "EPA to Strengthen Protection from Lead in Drinking Water," March 7, 2005, available online at http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/e8e0702362bb3df685256fbd005aaf0b!OpenDocument and EPA, Summary of Lead Action Level Exceedences for Medium (3,300-50,000) and Large (>50,000) Public Water Systems," available online at http://www.epa.gov/safewater/lcrmr/lead_data.html.

[2] EPA, Summary of Lead Action Level Exceedences for Medium (3,300-50,000) and Large (>50,000) Public Water Systems," available online at http://www.epa.gov/safewater/lcrmr/lead_data.html

[3] Carol Leonnig, Jo Becker, and David Nakamura, "Lead Levels in Water Misrepresented Across the US: Utilities Manipulate or Withhold Test Results to Ward off Regulators," Washington Post page A1 (October 5, 2005).

[4] EPA Inspector General, "EPA Claims to Meet Drinking Water Goals Despite Consistent Data Quality Problems," Report No. 2004-P-0008 (March 5, 2004), available online at http://www.epa.gov/oig/reports/2004/20040305-2004-P-0008.pdf

[5] See Erik Olson, "What's on Tap," June 2003, available online at http://www.nrdc.org/water/drinking/uscities/contents.asp.

[6] David Nakamura, "Water in D.C. Exceeds EPA Lead Limit: Random Tests Last Summer Found High Levels in 4,000 Homes Throughout City," Washington Post page A1 (January 31, 2004).

[7] See, Washington Post, Metro Drinking Water Archive, available online at http://www.washingtonpost.com/ac2/wp-dyn/metro/specials/water/archive?start=0&per=20.

[8] Eric H. Holder, Jr., Covington & Burling, "Summary of Investigation Reported to the Board of Directors of the District of Columbia Water and Sewer Authority," July 16, 2004, available online at http://www.washingtonpost.com/wp-srv/metro/specials/water/wasa071604.pdf .

[9] D.C. Appleseed Center, "Lead in the District of Columbia Drinking Water: A Call for Reform," December 2004.

[10] The EPA investigation resulted in a series of letters to WASA, and ultimately in an administrative order to WASA on consent. See EPA Region 3, "Key Communications" at http://www.epa.gov/dclead/communications.htm; see especially EPA Administrative Order [to D.C. WASA] for Compliance on Consent," June 17, 2004.

[11] Government of the District of Columbia, Office of the Inspector General, "Audit of the Elevated Levels of Lead in the District's Drinking Water ," January 5, 2005, available online at at http://oig.dc.gov/news/view2.asp?url=release%2FWASA%5Ffinal%5FReport%5Frevised%5F04%2D2%2D17LA%2Epdf&mode=audit&archived=0&month=00000

[12] See Debbi Wilgoren, "Report by D.C. Council Panel Urges City Oversight of Water: Some Proposals Similar to Those of Appleseed Center Study," Washington Post page B04 (December 24, 2004).

[13] CDC, "Blood Lead Levels in Residents of Homes with Elevated Lead in Tap Water — District of Columbia, 2004," Mortality & Morbidity Weekly Report, vol. 53, no. 12, April 2, 2004.

[14] Mayor Anthony Williams and Councilmember Carol Schwartz, "Final Report of the D.C. Interagency Task Force on Lead in Drinking Water and Recommendations of the Co-Chairs," April 22, 2004.

[15] See, for example, Holder report, supra note 4, EPA Administrative Order, supra note 6, and IG Report, supra note 7.

[16] Ibid.

[17] Compare WASA's original February 2004 announcement proclaiming that "extensive testing shows…the vast majority of the DCPS and facilities have extremely low levels of lead in the water…," http://www.dcwasa.com/lead/school_tests.cfm, with subsequent tests done (after extensive criticism of the first tests as misleading) in accordance with standard EPA protocols and showing, according to WASA's April announcement, that "Forty-three sinks and water fountains in 28 schools and one administrative building had lead levels above 20 ppb. These have been removed from use and replacement fixtures will be installed." http://www.dcwasa.com/lead/school_tests_april_2004.cfm.

[18] Holder report, supra note 4, at 3.

[19] See EPA, Supplemental Administrative Order for Compliance on Consent, Docket No. SDWA-03-2005-0025DS, January 14, 2005, available online at http://www.epa.gov/dclead/aowasa_supplement_011905.pdf; Carol Loennig, "WASA Breached Law, EPA Says Replacement of Lines Ordered After Flawed Lead Tests," Washington Post, page B01, January 22, 2005.

[20] See Carol Leonnig, Jo Becker, and David Nakamura, "Lead Levels in Water Misrepresented Across U.S. Utilities Manipulate or Withhold Test Results to Ward Off Regulators," Washington Post page A1, October 5, 2004.

[21] Letter from John Dunn, WASA, to Karen Johnson, EPA, "Re: MCL Violation, Total Coliform Rule," September 24, 2004, available online at http://www.epa.gov/dclead/WASA_TCR_letter_9-24-04.pdf.

[22] Letter from Jon Capacasa, EPA Region III, to Tom Jacobus, Army Corps of Engineers, and Jerry Johnson, WASA, August 3, 2004, available online at http://www.epa.gov/dclead/Aug_3_letter_EPA_to_WASA_and_Washington_Aqueduct.pdf.
[23] Personal Communication with Rick Rogers, EPA Region 3, December 2005.
[24] See Carol Leonnig, "Groundwater Toxin Near Aqueduct: Army Engineers Faulted for Inaction Since 2003 Finding," Washington Post page B1, October 27, 2004.
[25] See, Carol Leonnig, "DC Water Test Finds Toxic Substance," Washington Post page B1, November 19, 2004; "Trace Levels of Perchlorate Detected at Dalecarlia Treatment Plant," http://www.ci.falls-church.va.us/services/perchlorate.html
[26] Statement of Dr. Bruce Lanphear, Cincinnati Children's Hospital Medical Center, Before the House Energy & Commerce Committee, Subcommittee on Environment and Hazardous Materials, July 22, 2004, available online at http://energycommerce.house.gov/108/Hearings/07222004hearing1340/Lanphear,2195.htm.
[27] EPA, Summary of Lead Action Level Exceedences for Medium (3,300-50,000) and Large (>50,000) Public Water Systems," available online at http://www.epa.gov/safewater/lcrmr/lead_data.html
[28] Carol Leonnig, Jo Becker, and David Nakamura, "Lead Levels in Water Misrepresented Across the US: Utilities Manipulate or Withhold Test Results to Ward off Regulators," Washington Post page A1 (October 5, 2005).
[29] 81 F.3d 1387 (5th Cir. 1996).